

## S u m m a r y

Semiconductor sensor with a pixel structure as well as use of the sensor in a vacuum system

The invention is about a semiconductor sensor with a pixel structure (1), in which a capacity is designed to each pixel that stores the charge and converts it into voltage, that is readable if required, and the pixel structure (1) is mainly completely covered with a conductive layer (11), characterized in that the sensor is designed for direct detection of electrons and that gaps (22) are assembled between the pixel surface coating (11) of each single pixel, the surface of the gaps (22) between the pixels being covered with a second conductive layer (21) that is assembled in an insulated way from the pixel surface coatings (11). Moreover the use of the semiconductor sensor assembled in a vacuum system with photo cathode, which converts photons into electrons in an image-orientated way is intended.